AMERICAN PATENT AND PROMOTING CO.,
DETROIT, BUHL BLOCK, MICH.

Dominion of Canada.

99628

To all to whom these presents shall come

Whereas James F. Cass,

of Mt. Vernon, Washington, U.S.A.,

has petitioned the Commissioner of Patents, praying for the grant of a Patent for an alleged new and useful Improvement in Spraying Devices,

a description of which invention is contained in the specification, of which a duplicate is hereunto attached, and made an essential part hereof, and has selected his domicile at Ottawa, Ontario, in Canada, and has also complied with the other requirements of The Patent Act Chap. 61, Revised Statutes of Canada, and the Acts amending the same.

Now Therefore the present Patent grants to the said

James F. Cass,

his executors, administrators, legal representatives and assigns, for the period of Eighteen Years from the date of these presents, the exclusive right, privilege and liberty of making, constructing and using, and vending to others to be used, in the Dominion of Canada, the said invention, subject nevertheless to adjudication before any Court of competent jurisdiction.

Provided, that the grant hereby made is subject to the conditions contained in the Acts aforesaid.

The partial fee required for the term of six years having been paid to the Commissioner of Patents, this Patent shall cease at the end of six years from date, unless before the expiration of the said term, the holder thereof pay the fee required for the further term or terms as provided by law.

In Testimony Whereof, I have hereunto set my hand, and caused the Seal of the Patent Office to be hereunto affixed, at the City of Ottawa, in the Dominion of Canada, this Nineteenth day of June in the year of Our Lord, one thousand nine hundred and six.

Jos. F. Pope

Deputy Commissioner of Patents.

To all whom it may concern:

Be it known that I, James F. Cass, a citizen of the United States, residing at Mt. Vernon, in the county of Skagit, and State of Washington, Gentleman, have invented certain new and useful Improvements in Spraying Devices, for which I have obtained United States Letters Patent No. 804378, dated Nov. 14, 1905, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a new and improved apparatus for combining soap, fertilizing, insecticide, or other compounds with water and finally discharging the mixture as spray or compact stream, as required.

The object of my invention is to provide a simple and efficient device of this character which is automatic in its action without the use of valves and free from unnecessary complications in its structure.

The construction and advantages of the invention will be hereinafter explained, and illustrated in the accompanying drawings, in which-

Figure 1 is a sectional elevation of apparatus embodying my invention, and Fig. 2 is a similar enlarged view of certain details shown therein.

The reference-letter a designates the end portion of a watering-hose provided with a union coupling-nut b and c is a nozzle which may be provided with controlling devices (not shown) for regulating and causing it to discharge the conducted water as a spray or an unbroken stream. Inserted in the line between the parts a and c is a tubular fitting d, having a branch e, and which for convenience in coupling with adjoining parts the several ends thereof are provided, preferably, with screw-threads, as shown. Connected to said branch by a neck f is a receptacle g, preferably globular in shape which is charged with the substances or compuunds, which upon being mixed or dissolved with water forms the spraying solution. Between the outer extremity of the branch and an annular shoulder g interiorly of the receptacle-neck is a disk or diaphragm h, which is formed or provided with a curved or bent conducting-tube i, extending downwardly into and having its orifice directed toward or from the hose-nozzle c. This disk is likewise provided with one or more perforations, k, which make communication between said fitting and the receptacle exteriorly of the conducting-tube, whereby water may enter

the receptacle to replace substances as forced or drawn therefrom through the aforesaid conducting-tube when the latter is directed as shown by full lines in Fig. 1, or where it is reversed, as indicated by broken lines therein, the circulation or flow will be opposite. Gaskets 1 and 1' may advantageously be used between the faces of the diaphragm and the opposing surfaces of the said annular shoulder and the end of the branch for the purpose of preventing any leakage thereat.

In the construction shown the receptacle is charged by removing the same and fulling it through the neck, when, upon being replaced, the device is ready to operate, and which is accomplished by the combined action of the water in flowing by the protruding end of the conducting-pipe and the pressure of water to make an unbalanced pressure and create a positive circulation within the receptacle. The amount of the efflux of substances within the receptacle will vary according to the pressure and velocity of water and also the direction in which the conducting-tube is disposed. The device may be used for a great variety of purposes, such as washing windows with a soap solution, spraying trees with a sulfate or other compound, for distributing fertilizer or greening compounds upon lawns, destroying vermin in chicken-houses with insecticides, &c., and, as before alluded to, the stream may be delivered in its most suitable shape by the use of a hose-nozzle provided with stream-reuulating attachments or by separate nozzles for each special requirement.

I claim:

1. In a spraying apparatus, the combination with a water-conduit and a nozzle therefor, of a receptacle communicatively connected with the hose, a disk positioned in said connection and provided with a plurality of perforations and a conducting-tube carried by said disk and projecting into said conduit.

2. In a spraying apparatus, the combination of a tubular fitting having a branch, a receptacle adapted to be secured to said branch, a disk provided with a plurality of per forations intermediate the fitting and the receptacle, and a curved conducting-pipe extending from the disk and projecting into the fitting, said pipe being in open communication with one of the perforations in the disk.

3. In a spraying apparatus, the combination of a tubular fitting having a branch, a receptacle carried by said branch, a revoluble disk arranged between the receptacle and the fitting, a curved conducting-pipe carried by said disk, the said disk being provided with a plurality of perforations, one of which opens into said conducting-pipe.

4. In a spraying apparatus, the combination of a tubular fitting having a lateral exteriorly-screw-threaded branch, a receptacle having a neck screwing onto said branch, a revoluble disk located in said neck, a curved condicting-pipe formed integral with the disk, said disk being provided with a central perforation leading into said conducting-pipe and with a plurality of perforations lateral of said central perforation.

In testimony that I claim the foregoing as my own I affix my signature in the presence of two witnesses.

Mt. Vernon, Wash., this 16th day of February 1906.

James F. Cass.

WITNESSES:

John W. Meehan.

R. G. Hannaford.

SPRAYING DEVICE.

Fig 1

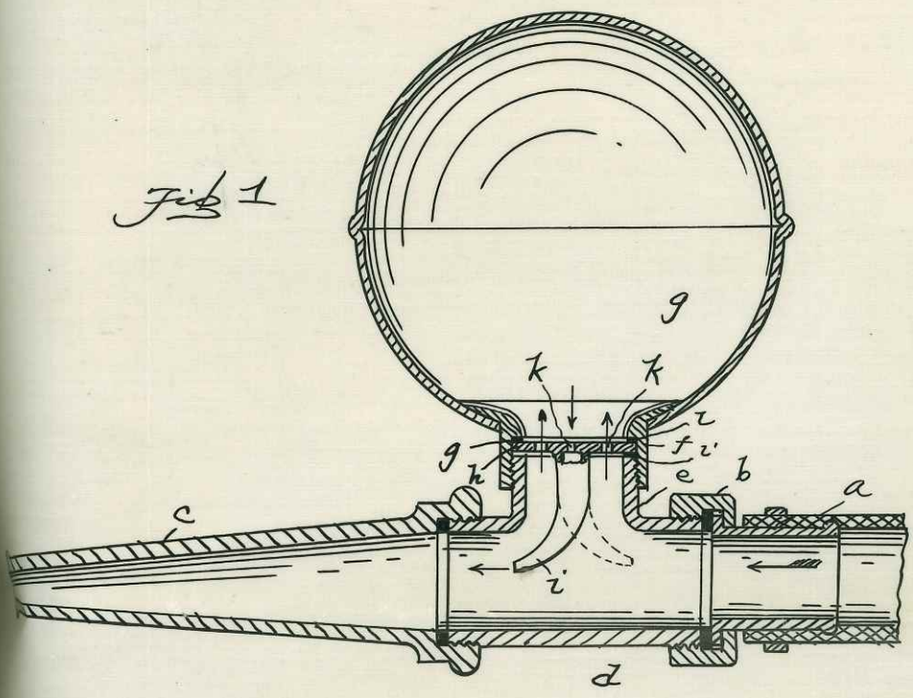
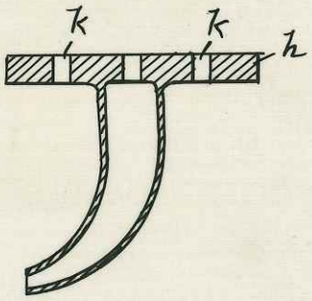


Fig. 2.



the drawing referred to in the specification hereunto annexed

Detroit Mich. Mar. 10, 1906.

Inventor

J. F. CASS.

J. H. Russell

Attorney.

Witnesses:

Worrall.

McDonald